



The Wood Component Company

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Sioo Wood Protection – Product Specification

Sioo Wood Protection is a water based wood impregnation system which uses proven silicon technology and natural materials to give wood long life protection. It is completely safe and environmentally friendly.

The product is manufactured by Sioo Wood Protection AB, Gothenburg, Sweden.

Sioo is a two component system consisting of Sioo Wood Protector and Sioo Surface Protection. The two components are designed to be used together in humid environments and interact to create a unique patented effect to protect wood.

The effect is due to the properties of the mineral silicon. In effect the method imitates how nature itself protects wood by petrification or creation of fossils. The Sioo system only contains natural ingredients which are biocide and emission free.

Technical Specification

I. Sioo Wood Protector

Sioo Wood Protector contains silicon, potassium and natural particles of wood and plants. The pH value is approximately 10.8. By means of the specifically prepared components Sioo Wood Protector penetrates wood very easily. Sioo dissolves fat constituents and opens up the wood structure. As a result of this Sioo penetrates the microstructure of the wood fibres. It does it so well that Sioo can be used on practically all types of wood. It is highly effective with ThemoWood.

When Sioo dries silica crystals are formed in a network. That is when the effect of Sioo shows - an environment is created where fungi and vermin cannot flourish or will disappear.

When Sioo crystallizes within or at the wood fibre, it is reinforced and cemented. It is an effortless and unique process that does not damage the fibres. Thus a layer of silica is created in the wood reinforcing it and making it more durable. At the same time, without tightening the wood, this layer creates a barrier that fungi and vermin cannot penetrate. In other words Sioo is open for diffusion. The layer of silica makes the wood unrecognizable as feed for fungi and vermin.

The silica layer also reflects heat.

The effectiveness of Sioo is proved by the EN 113 classification against fungi and the EN 46 classification against vermin. Sioo is approved for termite protection.

2. Sioo Surface Protection

Sioo Surface Protection consists of silicon in the shape of environmentally friendly and water based (silaner – in Swedish) and (siloxaner – in Swedish). The formula is designed to combine Sioo Wood Protector and Sioo Surface Protection, but Sioo Surface Protection can also be used separately on mineral surfaces and wood.

The two products complement each other and interact. In doing so major synergy effects are created. Sioo Wood Protector opens up the wood for the Surface Protection to penetrate more effectively. Sioo Surface Protection in turn fixes the wood protection in the wood chemically as well as physically. Thus it has a double function as an extra fixing agent and a water repellent. Sioo Surface Protection is also open for diffusion but creates an optimal environment for the two

products in co-operation to effectively protect and preserve wood.

Preparation for Treatment

If necessary:

Clean the surface from oil, colour, dirt and grease.

1. Soak the surface with a cleaning agent. Allow a few minutes for it to penetrate the surface.
2. Clean with a rotating brush of a high pressure cleaner or a thick and soft brush.
3. If necessary use a grinding machine to clean the surface.

Sioo Wood Protector is slightly alkaline. Protect glass, aluminium etc. Should it be necessary, wipe off spillage with a wet rag.

Climate Conditions for Treatment

The treatment is to be applied under cover or in the open in dry conditions to avoid rain during treatment.

The treatment is not to be carried out at temperatures below 5 degrees centigrade or externally on hot sunny days.

Application of Treatment

I. Step I - Sioo Wood Protector

When the surface is dry apply Sioo Wood Protector twice with an interval of at least 2 hours. Put it on evenly and abundantly with a soft brush, roller or a sprayer. Brush it out till all liquid

on the surface is gone. Stir it during treatment. After at least 4 hours the Surface Protection treatment should be applied.

Should it rain before the Sioo Surface Protection is applied grey silicon crystals are deposited. Sioo Wood Protector withstands some showers of rain.

I. Step 2 – Sioo Surface Protection

When the Sioo Wood Protector has dried for at least 4 hours, and preferably before it rains, the coating of Sioo Surface Protection should be applied. Put it on evenly and abundantly with a soft brush, roller or a sprayer. Permit the fluid to be absorbed for a few minutes. Then continue till the wood is saturated.

The surface is ready to use after about an hour. After 10–14 months the components have hardened.

Safety Considerations

Sioo Wood Protection contains no ingredients that mean it has hazardous properties and that necessitate an obligation to label. Accordingly, there are no hazardous substances as set out in the directive 67/548/EEC or 1999/45/EEC, or persistent, bio-accumulative toxic substances according to annex XIII or substances on the Candidate list. In addition, there are no harmful substances or parts of the product that are designated as irritating.

Both components are non-toxic and emission free.

Safety Data Sheets are available for both components and should be taken as integral to this specification.

Exposure Limitations/Personal Protection

Exposure limit values

Does not contain substances and such concentrations that restrictions are necessary

Exposure limitations at the workplace

1. Respiratory protective equipment

When spraying in an enclosed area or if ventilation is inadequate use suitable face protection

2. Protective gloves

Wear protective gloves when handling

3. Eye protection

Wear close fitting goggles or a face visor if there is a risk of splashing

4. Protective clothing

Wear protective clothing as needed

Wash with soap and water after handling

Maintenance

Should the treated surface be damaged in assembly and construction apply more Sioo Surface Protection to the damaged area. If major damage occurs first apply the Sioo Wood Protector.

With correct application Sioo will give a life of up to 15 years. Sioo Impregnation hardly requires any maintenance. If possible keep the surface clean. Dirt should be removed. Remains disappear over time because of Sioo's effectiveness. Should a part of the bright treated surface be scraped off, just apply more Sioo Surface Protection. The bright surface will return within a few months. If major damage is done also Sioo Wood Protector should be applied.

